

REMARKS

The Examiner's reconsideration of the application is urged in view of the cancellation of claims 1-19 and 34-48, and comments which follow.

In the Office Action, the Examiner has rejected claims 1-58 under 35 U.S.C. §103 as being unpatentable over Grossglauser U.S. Patent No. 6,353,596. Reconsideration is requested.

Grossglauser discloses a method and a system for providing a multicast service between multiple senders and multiple receivers (col. 1, l.21-23). To this end, it teaches to use a shared tree between senders and receivers to ensure multipoint-to-multipoint multicasting (col. 7, l.1-3 and col. 8, l.43-45). Such multiplexing implies to map multiple incoming VCs into one or several outgoing VCs at the switches of the network (col. 8, l.48-51).

According to Grossglauser, when a cell is received at a switch S on a virtual circuit VC, the switch forwards it on all the links of the spanning tree other than the one it was received on (col. 13, l.7-12). The switch also forwards the packet up to the core (col. 8, l.16-17). As an example, a cell received at the switch S1 from the sender S1 will be forwarded to the receiver R2 via the pre-established VC2 and toward the core via the pre-established VC5 in FIG. 4 (col. 12, l.57 – col. 13, l.6).

In contrast, Claim 20 of the present application relates to a provisioning method for providing a VPN service. According to the method claimed, CE interfaces are allocated to a VPN supporting a plurality of virtual local area networks (VLANs) and are arranged for exchanging tagged data frames with CE devices respectively connected to PE devices through said CE interfaces, each tagged frame including a VLAN identifier. A tagged frame is first received from a CE device at each CE interface allocated to said VPN and a correspondence between said CE interface and each VLAN identifier included in said tagged frame is learned. Then, it is determined whether a pair of CE interfaces allocated to said VPN and belonging to two PE devices correspond to a common VLAN identifier. And finally, in response to such detection, a virtual circuit is established in the shared network infrastructure between said two PE devices, for forwarding frames including said common VLAN identifier.

It is understood that the Examiner considers the receivers (e.g. R1 in FIG. 4) of Grossglauser as CE devices and the switches (e.g. S1 in FIG. 4) of Grossglauser as PE devices communicating within a VPN. However, even with this interpretation, it is not taught

in Grossglauser that tagged data frames including VLAN identifiers would be exchanged between such "PE" and "CE" devices. Neither is it disclosed that such "VPN" would support a plurality of virtual local area networks (VLANs).

The Examiner seems to compare a VLAN with a simple conversation. It is submitted that this interpretation is incorrect, since a VLAN is a sub-network (that may be independent of other VLANs, if any) within which communications can be made. It cannot be simply reduced to the information it transports.

Moreover, each switch of Grossglauser has a routing table giving a correspondence between pre-established incoming and outgoing VCs (see FIG. 4). But no correspondence between a particular receiver and a VLAN identifier included in a tagged frame received from said receiver is learned by the switch.

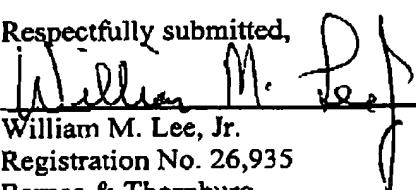
In addition, it is true that virtual circuits (e.g. VC5 of FIG. 4) are present in the system of Grossglauser. But their establishment is not made in response to detecting whether a pair of CE interfaces belonging to two PE devices correspond to a common VLAN identifier.

Therefore, even when interpreting the terms of Claim 20 of the present invention in what is submitted to be an unduly broad way, it still contains many differences with the teaching of Grossglauser. Actually, Grossglauser discloses a very different subject-matter from which considerations for providing a VPN service in a multi VLANs context is completely absent.

The subject-matter of Claim 20 is thus new and non-obvious in view of Grossglauser. The same applies to Claim 49. The other claims 21-33 and 50-58 are submitted to be allowable as well, since they depend on Claim 20 or 49 directly or indirectly.

In view of the foregoing, it is submitted that the application is in condition for allowance, and the Examiner's further and favorable reconsideration in that regard is urged.

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Respectfully submitted,

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